

Amended Claims with Markings Pursuant to 37 C.F.R. § 1.121(c)(1)(ii)

1. (amended) A process for the isolation of nucleic acids from a sample including the following steps:

- (a) applying at least one nucleic acid sample to a non-siliceous membrane;
- (b) immobilizing the nucleic acids of the nucleic acid sample on the membrane in the presence of a compound selected from the group consisting of a salt of a metal and/or ammonium cation with a mineral acid, a salt of a mono or polybasic or polyfunctional organic acid with an alkaline or alkaline-earth metal, a hydroxy-functional compound of an aliphatic or acyclic saturated or unsaturated hydrocarbon, a phenol or polyphenol, a chaotropic agent, and combinations thereof, wherein the nucleic acids are reversibly immobilized on the membrane;
- (c) releasing the immobilized nucleic acids from the membrane; and
- (d) removing the released nucleic acids through the membrane, whereby the membrane is comprised of one or more materials selected from the group consisting of nylon, polysulfone, polyethersulfone, polycarbonate, polyacrylate, acrylic copolymer, polyurethane, polyamide, polyvinylchloride, polyfluorocarbonate, poly-tetrafluoro-ethylene, polyvinylidene fluoride, polyethylene-tetrafluoro-ethylene-copolymerisate, polybenzimidazole, polyethylene-chlorotrifluoro-ethylene-copolymerisate, polyimide, polyphenylene sulfide, cellulose, cellulose-mix ester, cellulose nitrate, cellulose acetate, polyacrylonitrile, polyacrylonitril-copolymer, nitrocellulose, polypropylene and polyester.

9. (amended) A process for the isolation of nucleic acids from a sample comprising the following steps:

- (a) applying at least one nucleic acid sample to a non-siliceous surface;
- (b) immobilizing the nucleic acids of the nucleic acid sample on the surface in the presence of a compound selected from the group consisting of a salt of a metal and/or ammonium cation with a mineral acid, a salt of a mono or polybasic or polyfunctional organic acid with an alkaline or alkaline-earth metal, a hydroxy-functional compound of an aliphatic or acyclic saturated or unsaturated hydrocarbon, a phenol or polyphenol, a chaotropic agent, and combinations thereof, wherein the nucleic acids are reversibly immobilized on the membrane;

(c) releasing the immobilized nucleic acids from the surface with an elution agent, characterized in that the release takes place at a temperature T , whereby $10^{\circ}\text{C} \geq T \geq T_{\text{S,EM}}$, and $T_{\text{S,EM}}$ equals the freezing point of the elution agent.

14. (amended) A process for the isolation of nucleic acids from a sample comprising the following steps:
- (a) adjusting a nucleic acid sample to binding conditions that permit reversible immobilization of the nucleic acids contained in the sample on a non-siliceous surface;
 - (b) applying the nucleic acids sample to the non-siliceous surface; and
 - (c) immobilizing the nucleic acids on the surface in the presence of a compound selected from the group consisting of a salt of a metal and/or ammonium cation with a mineral acid, a salt of a mono or polybasic or polyfunctional organic acid with an alkaline or alkaline-earth metal, a hydroxy-functional compound of an aliphatic or acyclic saturated or unsaturated hydrocarbon, a phenol or polyphenol, a chaotropic agent, and combinations thereof, wherein the nucleic acids are reversibly immobilized on the membrane, characterized in that, before and/or after adjusting the binding conditions there is a pre-treatment of the sample.
65. (amended) The process according to Claim 38, wherein washing steps are carried out using salt or buffer solutions selected from aqueous salt solutions of metal and/or ammonium cations with mineral acids, including alkaline halides, alkaline-earth halides, alkaline sulfates, alkaline-earth sulfates, alkaline phosphates, alkaline-earth phosphates, or mixtures thereof; aqueous solutions of salts of mono or polybasic or polyfunctional organic acids with alkaline or alkaline-earth metals, including sodium, potassium or magnesium salts of organic dicarboxylic acids including oxalic acid, malonic acid and succinic acid; aqueous solutions of sodium or potassium salts of a hydroxy or polyhydroxycarboxylic acid including citric acid; hydroxy-functional compounds of aliphatic or acyclic saturated or unsaturated hydrocarbons including $\text{C}_1\text{-C}_5$ alkanols and alditols; phenols [ir] or polyphenols; one or more chaotropic agents including salts selected from the group of trichloroacetates, thiocyanates, perchlorates, iodides, guanidinium hydrochloride, guanidinium isothiocyanate, and urea.